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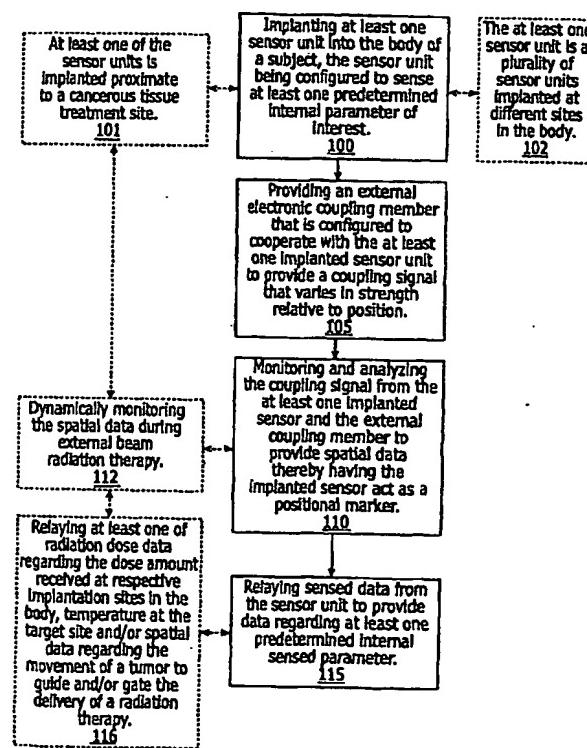
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(54) Title: METHODS, SYSTEMS, AND COMPUTER PROGRAM PRODUCTS FOR PROVIDING DYNAMIC DATA OF POSITIONAL LOCALIZATION OF TARGET IMPLANTS



(57) Abstract: Systems for locating implanted in vivo sensor systems adapted for use with an external beam radiation therapy delivery source include: (a) an external solenoid member; (b) an articulated arm operatively associated with the external solenoid member, wherein, in operation, the articulated arm is configured to translate the solenoid; (c) a controller configured to direct the movement of the articulated arm, the controller being in communication with a power source configured to power the external solenoid; (d) at least one implantable sensor unit, wherein the at least one implantable sensor unit is configured to sense at least one predetermined parameter of interest in vivo, and wherein the at least one implantable sensor unit comprises a solenoid, and wherein, in operation, the sensor unit solenoid cooperates with the external solenoid to generate a magnetic coupling signal having a signal strength that varies based on the position of the external solenoid member relative to the implanted sensor unit; (e) a computer module in communication with the controller comprising computer program code that evaluates the coupling signal strength in relation to the position of the external solenoid and determines the position of the at least one sensor unit; and (f) an external reader configured to wirelessly communicate with the at least one implantable sensor unit to obtain data associated with the at least one predetermined parameter of interest.

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